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| 10/542,865 | 01/10/2006 | Gabriel Sirat | 30238 | 8952 | | | | | | | | | | | | |
| 7590 Martin Moynihan Anthony Castorina Suite 207 2001 Jefferson Davis Highway Arlington, VA 22202 | | 09/24/2007 | <table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">GIGLIO, BRYAN J</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2877</td><td></td></tr><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>09/24/2007</td><td>PAPER</td></tr></table> | | EXAMINER | | GIGLIO, BRYAN J | | ART UNIT | PAPER NUMBER | 2877 | | MAIL DATE | DELIVERY MODE | 09/24/2007 | PAPER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/542,865

Applicant(s)

SIRAT ET AL.

Examiner

Bryan J. Giglio

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 428-477 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 470, 471, 475 and 477 is/are allowed.
- 6) ☒ Claim(s) 428-437, 439-445, 447-450, 452-469 and 476 is/are rejected.
- 7) ☒ Claim(s) 438, 446, 451, 462, 464, and 465 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/21/2006
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 8/21/2006 is being considered by the examiner.

Preliminary Amendment

The Preliminary Amendment, submitted on 21 July 2005, has been entered.

Claim Objections

Claims 462, and 464-465 are objected to because of the following informalities:

Claim 462 recites the limitation "said at least one geometrical crystal filter" in line 4. There is insufficient antecedent basis for this limitation in the claim. For the purposes of applying art, claim 462 will be construed to depend from claim 461, which introduces the geometrical crystal filter.

Claim 464 recites the limitations "said low-resolution optical device" and "said low-resolution spectral range" in lines 1-3. There is insufficient antecedent basis for this limitation in the claim. For the purposes of applying art, "said low-resolution optical device" and "said low-resolution spectral range" will be construed to mean "a low-resolution optical device" and "a low-resolution spectral range".

Claim 465 is objected to as dependent upon previously objected claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 431 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim

which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 431, 460, 461, 464, and 465 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 431 provides for the use of the apparatus for analyzing light, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

In regard to claim 460, 461, 464, and 465, it is unclear and indefinite what is meant by the limitation "low-resolution optical device" and "low-resolution spectral range". The word "low" has only relative subjective value, and no previous limitations of the claims give "low-resolution" any context, such as an example of high resolution or normal resolution. Furthermore, it is unclear what resolution is meant to apply to, since there exist temporal, spectral and spatial resolution possibilities in typical optical systems.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 428-437, 439-445, 447-450, 452-465, 467-469 and 476 are rejected under 35

U.S.C. 102(b) as being anticipated by Funk, et al. (U.S. Patent No. 6031609).

In regard to claim 428, the Funk reference teaches an apparatus for analyzing light having at least one wavelength, the apparatus comprising: (a) a light deflector for deflecting the light so as to provide a deflected light beam characterized by at least one wavelength-dependent angle, respectively, corresponding to the at least one wavelength of the light (see fig.1, element 16); (b) an encoder, capable of encoding said deflected light beam so as to provide an encoded light beam characterized by at least one angle-dependent polarization state (see fig.1, LCD mask, with varying modulation of the angularly diffracted light), respectively, corresponding to said at least one wavelength-dependent angle (see c.4, I.61-67); and (c) a decoder, for decoding said encoded light beam so as to determine at least one spectral component of the light (see fig.1, elements 42, 46 and 48, DSP board).

In regard to claim 429, the Funk reference teaches the apparatus for analyzing light, serving as a component in a system or device selected from the group consisting of a wavelength amplifying system, an optical sensor (see fig.1), a spectrograph (see c.4, I.56-59), an imaging spectrograph (see c.4, I.49-53), a time-frequency spectrograph (see c.4, I.61-66), a telecentric imaging system, an optical storage medium, an optical communication system, a tunable laser system, a lithography system, an optical computing system and a fiber Bragg sensor.

In regard to claim 430, the Funk reference teaches the apparatus for analyzing light serving for performing at least one operation selected from the group consisting of stabilizing laser radiation, monitoring optical pulses, modulating a light source (see fig.1), discriminating between Raman emission

and fluorescence (see c.4, l.56-59), discriminating between different light sources (see c.4, l.56-59), testing a multi-lasers test system, generating frequency multiplexed signals and sensing changes in environmental conditions, influencing said deflected light beam and/or said encoded light beam.

In regard to claim 431, the Funk reference teaches the apparatus for analyzing light serving for sensing changes in environmental conditions, influencing said deflected light beam and/or said encoded light beam (see c.4, l.55-59, where making measurements in emission spectroscopy mode comprises measuring effects on the light which is deflected and encoded).

In regard to claim 432, the Funk reference teaches the apparatus for analyzing light wherein said environmental conditions are selected from the group consisting of changes in temperature (see c.4, l.55-59, where making measurements of a flame spectrum would inherently convey temperature changes).

In regard to claim 433, the Funk reference teaches the apparatus for analyzing light further comprising: (d) a mechanism for varying at least one parameter representing at least one of said light deflector and said encoder so as to span a discrete basis of signals, each corresponding to one value of said at least one parameter (see fig.1, element 28).

In regard to claim 434, the Funk reference teaches the apparatus for analyzing light wherein said decoder is operable to use said discrete basis of signals for determining wavelengths (see c.4, l.61-66).

In regard to claim 435, the Funk reference teaches the apparatus for analyzing light further comprising a beam splitter, for splitting the light into two beams, each having a predetermined polarization (see fig.1, element 36).

In regard to claim 436, the Funk reference teaches the apparatus for analyzing light further comprising at least one polarization rotator, designed and configured so as to rotate a polarization of said

deflected light beam and/or a polarization of said encoded light beam (see fig.1, LCD mask, and see elements 22 and 26).

In regard to claim 437, the Funk reference teaches the apparatus for analyzing light wherein said light deflector is selected from the group consisting of a grating and a prism (see c.4, l.26-28).

In regard to claim 439, the Funk reference teaches the apparatus for analyzing light wherein said encoder is operable to generate at least one angle-dependent polarization phase-shift, thereby to provide said polarization state or said polarization states (see c.4, l.61-67, LCD phase shifts light between elements 22 and 26).

In regard to claim 440, the Funk reference teaches the apparatus for analyzing light wherein said encoder is calibrated so as to generate a zero or small polarization phase-shift for a predetermined set of wavelengths and a non-zero polarization phase-shift for wavelengths other than said predetermined set of wavelengths (see c.4, l.61-67, shift is time varying between 0 and $\pi/2$ radians).

In regard to claim 441, the Funk reference teaches the apparatus for analyzing light wherein said encoder comprises at least one geometrical crystal filter characterized by at least one angle-dependent index of refraction (see c.4, l.31-38, index angular dependence is inherent).

In regard to claim 442, the Funk reference teaches the apparatus for analyzing light further comprising a first mechanism for varying said angle-dependent polarization phase-shift (see fig.1, element 28).

In regard to claim 443, the Funk reference teaches the apparatus for analyzing light wherein said first mechanism is operable to rotate said at least one geometrical crystal filter about an axis, so as to vary said angle-dependent polarization phase-shift (see c.4, l.31-38, rotation is inherent).

In regard to claim 444, the Funk reference teaches the apparatus for analyzing light further comprising a first polarization rotator, for rotating a polarization of said deflected light beam from a first polarization orientation to a second polarization orientation (see c.4, l.31-38).

In regard to claim 445, the Funk reference teaches the apparatus for analyzing light wherein said first polarization rotator is designed and constructed such that said second polarization orientation substantially equals an orientation of said at least one geometrical crystal filter (see c.4, l.31-38).

In regard to claim 447, the Funk reference teaches the apparatus for analyzing light wherein said first mechanism is operable to generate a further deflection of the deflected light beam, said further deflection being time-dependent so that said angle-dependent polarization phase-shift varies (see c.4, l.61-67).

In regard to claim 448, the Funk reference teaches the apparatus for analyzing light wherein said first mechanism is operable to vary an effective length of said at least one geometrical crystal filter, thereby to vary said angle-dependent polarization phase-shift (see c.4, l.31-38, inherent).

In regard to claim 449, the Funk reference teaches the apparatus for analyzing light wherein said first mechanism is capable of applying a voltage on said at least one geometrical crystal filter, thereby to vary said effective length (see c.4, l.31-38, inherent).

In regard to claim 450, the Funk reference teaches the apparatus for analyzing light wherein a shape of said at least one geometrical crystal filter is selected such that when said first mechanism applies a translational motion thereto, said effective length is varied (see c.4, l.31-38, inherent).

In regard to claim 452, the Funk reference teaches the apparatus for analyzing light further comprising at least one additional geometrical crystal filter, for polarizing the light prior to impinging of the light on said light deflector (see fig.1, element 22).

In regard to claim 453, the Funk reference teaches the apparatus for analyzing light wherein said decoder is capable of splitting said encoded light beam into two secondary polarized light beams, and calculating a contrast function between said two secondary polarized light beams (see fig.1, elements 36, 42, 46, and 48, and see fig.2).

In regard to claim 454, the Funk reference teaches the apparatus for analyzing light wherein said decoder is capable of generating a representative time-delay for each polarization state, and using said representative time-delay for determining said at least one spectral component of the light (phase change in the liquid crystal is a type of time delay, changing propagation speed, at various frequencies for each wavelength).

In regard to claim 455, the Funk reference teaches the apparatus for analyzing light wherein said decoder comprises: (i) a temporal polarization phase-shifter, communicating with an external clock, and capable of accumulating a time-dependent polarization phase-shift to said encoded light beam; and (ii) a polarization phase-shift analyzer, capable of analyzing said time- dependent polarization phase-shift so as to provide an optical signal having a time- dependent intensity, corresponding to said time-dependent polarization phase-shift (see fig.1 and 2, all phase shift information is carried by the time dependency of the signal frequencies, and the DSP is coupled to computer, while the modulator is couple to a frequency controller, or type of clock, to control temporal phase shifting)

In regard to claim 456, the Funk reference teaches the apparatus wherein said decoder further comprises an optical converter, for converting said optical signal to electrical signal (see fig.1, detectors).

In regard to claim 457, the Funk reference teaches the apparatus further comprising at least one filter for filtering a portion of the light, prior to an impingement on said deflector, said encoder and/or said decoder (see c.3, l.46-47).

In regard to claim 458, the Funk reference teaches the apparatus for analyzing light further comprising a first anamorphic prism, positioned so as to reduce a spot size of the light prior to impingement of the light on said deflector (see fig.1, element 30).

In regard to claim 459, the Funk reference teaches the apparatus for analyzing light further comprising a second anamorphic prism, positioned so as to increase angular dispersion of said deflected light beam, prior to impingement of said deflected light beam on said decoder, thereby to optimize a wavelength resolution (see c.6, l.51-56).

In regard to claim 460, the Funk reference teaches the apparatus for analyzing light further comprising a low-resolution optical device, for determining a low-resolution spectral range of the light (see fig.1, element 42, single PMT).

In regard to claim 461, the Funk reference teaches the apparatus for analyzing light further comprising a low-resolution optical device, for determining a low-resolution spectral range of the light (see fig.1, element 42, single PMT).

In regard to claim 462, the Funk reference teaches the apparatus for analyzing light wherein said low-resolution optical device comprises an additional geometrical crystal filter, and further wherein a free spectral range of said additional geometrical crystal filter is different than a free spectral range of said at least one geometrical crystal filter (see fig.1, element 22 and 26, polarizers, which would inherently be different from a liquid crystal device which changes constantly with time, and where resonance is not being detected because cavities are too large to effect wavelength, or variable to effect polarization. "different" is broad.).

In regard to claim 463, the Funk reference teaches the apparatus for analyzing light wherein said free spectral range of said additional geometrical crystal filter is substantially larger than said free spectral

range of said at least one geometrical crystal filter (see fig.1, element 22 and 26, polarizers, which would inherently be different from a liquid crystal device which changes constantly with time, and where resonance is not being detected because cavities are too large to effect wavelength, or variable to effect polarization. "substantially larger" is broad.).

In regard to claim 464, the Funk reference teaches the apparatus for analyzing light wherein said low-resolution optical device is capable of directly using said at least one wavelength-dependent angle so as to determine said low-resolution spectral range (see fig.1, LC element determines range based on its size and number of elements, and the angle light strikes it).

In regard to claim 465, the Funk reference teaches the apparatus for analyzing light wherein said low-resolution optical device is a position sensing device, whereby a position of said deflected light beam corresponds to a respective wavelength-dependent angle (see fig.1, result of prism/grating is spatially based frequency modulation which is ultimately decoded such that position correlate exactly with frequency).

In regard to claim 467, the Funk reference teaches the apparatus for analyzing light wherein the apparatus is characterized by a sub nanometer resolution (see c.6, I.55-56).

In regard to claim 468, the Funk reference teaches the apparatus for analyzing light wherein the apparatus is characterized by a total analysis time of from about 1 nanosecond to a few hours (see c.6, I.34-43).

In regard to claim 469, the Funk reference teaches the apparatus wherein the apparatus is characterized by a detectivity of from about -80 db to about -0 db (see c.4, I.53-55, inherent in 1P28A PMT).

In regard to claim 476, the Funk reference teaches a method of analyzing light having at least one wavelength, the method comprising: (a) deflecting the light so as to provide a deflected light beam characterized by at least one wavelength-dependent angle, respectively, corresponding to the at least one wavelength of the light (see fig.1, element 16); (b) encoding said deflected light beam so as to provide an encoded light beam characterized by at least one angle-dependent polarization state, respectively, corresponding to said at least one wavelength-dependent angle (see above and see fig.1, element 24); and (c) decoding said encoded light beam so as to determine at least one spectral component of the light (see above and see fig.1, element 48).

Claims 472 is rejected under 35 U.S.C. 102(e) as being anticipated by Carey, et al. (U.S. Patent No. 7110675).

In regard to claim 472, the Carey reference teaches a communications system having a multiplexing apparatus for generating an optical signal characterized by a plurality of wavelengths and a demultiplexing apparatus, for extracting said information from the optical signal (see fig.1), the demultiplexing apparatus comprising: (a) a light deflector for deflecting the light so as to provide a deflected light beam characterized by a plurality of wavelength-dependent angles, respectively, corresponding to the plurality of wavelengths of the optical signal(see fig.1, element 22, and see c.3, l.4-10); (b) an encoder, capable of encoding said deflected light beam so as to provide an encoded light beam characterized by a plurality of angle-dependent polarization states, respectively, corresponding to said plurality of wavelength-dependent angles (see c.6, l.42-50, "birefringent material", whereas angle dependence is based on diffractive element 22, polarization based modulation results from inherent birefringent properties); and (c) a decoder, for decoding said encoded light beam so as to determine the plurality of wavelengths of the optical signal (see c.5, l.30-36).

Claims 473 is rejected under 35 U.S.C. 102(e) as being anticipated by Trisnadi, et al. (U.S. Patent No. 6782205).

In regard to claim 473, the Trisnadi reference teaches an apparatus for analyzing light having at least one wavelength, the apparatus comprising, an encoder (see fig.5, element 215), a light deflector (see fig.5, element 212) and a decoder (see c.8, l.21-26); said encoder and said light deflector being designed and constructed such that the light is encoded by said encoder to a first set of polarization states (inherent in quarter wave plate), deflected by the deflector to a set of wavelength-dependent angles (inherent in diffractive grating), reflected back to said encoder (see fig.5), encoded by said encoder to a second set of polarization states and impinges on said decoder (inherent in quarter wave plate); said decoder being operable to decode said second set of polarization states so as to determine at least one spectral component of the light (see c.8, l.21-26, polarization states can be anything, and still detected).

In regard to claim 474, the Trisnadi reference teaches the apparatus for analyzing light serving as a component in a system or device selected from the group consisting of a wavelength amplifying system, an optical sensor, a spectrograph, an imaging spectrograph, a time-frequency spectrograph, a telecentric imaging system, an optical storage medium, an optical communication system (see c.2, 11-13), a tunable laser system, a lithography system and an optical computing system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 466 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funk, as cited above, in view of Official Notice of well know practice in the art.

The Funk reference teaches all of the elements of claim 428 from which claim 466 depends, as cited above. The reference is silent to the apparatus characterized by a sub picometer resolution. Funk teaches that a plurality of dispersive optics may be used in series to increase resolution, and states as example resolutions as small as 20 picometers (see c.6, l.51-56). Official notice is hereby taken that it would have been obvious to try to obtain higher resolution than 20 picometers using the exact same process of multiple elements, in order to permit expansion of a limited wavelength range over an LC mask surface.

Therefore it would have been obvious to a person having ordinary skill in the art that additional dispersive elements could be used in the Funk reference to further increase spectral resolution to sub-picometer amounts in order to increase a limited wavelength range over an LC mask surface.

Allowable Subject Matter

Claims 470, 471, 475 and 477 are allowed over the prior art of record.

Claims 438, 446, and 451 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 438, the prior art of record, taken alone or in combination, fails to disclose or render obvious the apparatus for analyzing light wherein said grating is characterized by a first grating equation in a first dimension and a second grating equation in a second dimension, in combination with the limitations of claim 438.

As to claim 446, the prior art of record, taken alone or in combination, fails to disclose or render obvious the apparatus for analyzing light further comprising a second polarization rotator, for rotating a polarization of said encoded light beam from said second polarization orientation to said first polarization orientation, in combination with the limitations of claim 446.

As to claim 451, the prior art of record, taken alone or in combination, fails to disclose or render obvious the apparatus for analyzing light further wherein said light deflector is a dynamic grating characterized by a grating equation and further wherein said first mechanism is operable to vary said grating equation, thereby to vary said wavelength- dependent angle, thereby also to vary said angle- dependent polarization phase-shift, in combination with the limitations of claim 451.

As to claim 470 and 477, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus or method for measuring a wavelength of a monochromatic light, the apparatus or method comprising: (a) a light deflector for deflecting the monochromatic light at a wavelength-dependent angle; (b) an encoder, capable of encoding the monochromatic light according to said wavelength-dependent angle thereby to provide an encoded light beam; and (c) a decoder, for decoding said encoded light beam so as to determine the wavelength of a monochromatic light.

As to claim 475, the prior art of record, taken alone or in combination, fails to disclose or render obvious a Bragg sensor system for detecting vibrations, the system having an apparatus for analyzing light having at least one wavelength, the apparatus comprising: (a) a light deflector for deflecting the light so as to provide a deflected light beam characterized by a plurality of wavelength-dependent angles, respectively, corresponding to the plurality of wavelengths of the optical signal; (b) an encoder, capable of encoding said deflected light beam so as to provide an encoded light beam characterized by a plurality of angle- dependent polarization states, respectively, corresponding to said plurality of wavelength- dependent

angles; and (c) a decoder, for decoding said encoded light beam so as to determine the plurality of wavelengths of the optical signal, thereby to detect vibrations of said light deflector and/or said encoder.

Conclusion

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice in this Office Action mailed. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Giglio whose telephone number is (571) 270-1028. The examiner can normally be reached on M-F, 7:30AM-5:00PM EST, Alt. Friday Off.

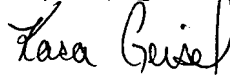
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on (571)272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



BG
13 September 2007

KARA GEISEL

AU 2877